



Chronic pain and weather conditions in patients suffering from temporomandibular disorders: A pilot study

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Year: 2012
Journal: Community Dentistry and Oral Epidemiology. 40 (Suppl 1): 56-64

Abstract:

OBJECTIVES: Patients with temporomandibular disorders (TMDs) often report increased pain in response to changes in weather conditions. Nevertheless, scientific evidence supporting this relationship is scarce. The aim of this study was to assess a potential relationship between pain intensity and meteorological factors, through a newly developed, portable device, in patients affected by chronic masticatory muscle pain. **METHODS:** Seven female subjects were diagnosed with myofascial pain of the masticatory muscles, according to RDC/TMD criteria, were recruited, and participated in the study. Each patient was provided with a portable data logger that recorded and stored weather variables (atmospheric pressure, air humidity, temperature) every 15 min. Patients were asked to record the level of perceived pain on an electronic visual analogue scale (VAS) every hour. The relationship between meteorological variables and pain scores was investigated using separate generalized least squares regression models with a correlation structure estimated via autoregressive integrated moving average models. **RESULTS:** Individual VAS trajectories in the study period were different. The effect of meteorological factors on VAS scores was statistically significant in five subjects, with at least one main effect and/or one two-way interaction between meteorological variables being significant. **CONCLUSIONS:** The analyses suggest the existence of different interindividual responses to climatic changes. However, the identified putative role of meteorological variables and of their two-way interactions suggests that further investigations on larger samples may be useful to assess the research question under examination.

Source: <http://dx.doi.org/10.1111/j.1600-0528.2011.00667.x>

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Meteorological Factors, Temperature

Temperature: Fluctuations

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Climate Change and Human Health Literature Portal

Geographic Location:

resource focuses on specific location

Global or Unspecified

Health Impact:

specification of health effect or disease related to climate change exposure

Mental Health/Stress, Other Health Impact

Mental Health Effect/Stress: Mood Disorder

Other Health Impact: Temporomandibular disorders

Resource Type:

format or standard characteristic of resource

Research Article

Timescale:

time period studied

Time Scale Unspecified